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Media coverage of Fukushima nuclear power station accident 2011 (A case study of NHK and BBC WORLD TV stations)

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Abstract

This paper attempts to investigate the mass media coverage of Fukushima No. 1 (*Dai-ichi*) Nuclear Power Plant (NPP) accident in 2011. The purpose of this study is to explore how NHK and BBC World covered the Fukushima accident, what became the focus of their coverage, and what similarities and differences NHK and BBC World had in reporting this case. The data is collected from the Japanese public television station NHK and BBC English by recording the entire programs on NHK and BBC from March 11-18, 2011.

The investigation of NHK and BBC coverage on the nuclear crisis in Fukushima will be focused on the news sources, news format and news themes. The discussion is focused on the news framing of the three main themes, i.e., the first explosion occurring at the Fukushima nuclear power plant, the operation of watering down the reactor by helicopter, and the delivery of video messages from the Japanese emperor. The analysis shows that NHK seemed to be in favour of the Japanese government and the Tokyo Electric Power Company in the selection of information sources that were dominated by the government's official statements. In addition to the bias of its information sources, NHK also supported government policy through their news framing of the accident.

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Keyword: Nuclear Power Plant; Fukushima; Accident; News framing

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1. Introduction

This paper discusses the mass media coverage highlighting the crisis situation in Japan caused by the breakdown of the nuclear reactor at the Fukushima No. 1 (*Dai-ichi*) Nuclear Power Plant, operated by the Tokyo Electric Power Company (TEPCO). The term “nuclear crisis” refers to the Japanese prime minister’s statement on the “nuclear emergency situation” that was broadcasted live by Japanese television stations on March 11, 2011 at 20:23 pm. This nuclear crisis is the second-largest nuclear power plant failure after the nuclear disaster in Chernobyl (now Ukraine) of April 26, 1986.

Japan is a country that has been frequently hit by earthquakes and tsunamis. Many massive earthquakes that cause 30-meter-high tsunamis have been noted in Japanese history. Japan is also the third-biggest country in the world that has nuclear power plants. Most of the nation’s 54 reactors are located near the coast. The Japanese government also depends on nuclear power as an energy source. Nuclear power is an advanced technology that has the potential to cause huge disasters. Because of this risk, the use of nuclear power for peaceful uses has been being viewed as a controversy until now.

The purpose of this study is to determine how NHK and BBC World covered the nuclear crisis at Fukushima, what became the focus of their coverage, what similarities and differences NHK and BBC World had in reporting this case, and what messages both wanted to deliver through their coverage.

2. Sources of data

The main data source of this study is the coverage reported by the Japanese television NHK and BBC English of Britain. NHK is the Japanese national television station network which was established in 1926 and which has won the trust of the Japanese people. Meanwhile, the BBC was chosen for this study because of its high rating of public trust for accuracy and objectivity of information. The BBC is the first private national broadcast organization in the world. Since it was established on January 1, 1927, the BBC has had a reputation as a professional and objective broadcaster. The data were collected by recording the entire programs on NHK and BBC from March 11-18, 2011. The samples were taken in the media research laboratory of the Faculty of Social Studies, Doshisha University, Kyoto, Japan. The time used in the news gathering was Japan Standard Time (JST).

3. NHK and BBC World Coverage on Fukushima Nuclear Crisis

By the time the earthquake and tsunami hit Miyagi Prefecture, television stations immediately broadcasted the situation with real-time images and scenes from that area. The coverage was repeated and updated simultaneously with the latest information and images. In addition to the news, the latest information is also given through the breaking news and the running texts displayed at the bottom of screen. This was not only found on one channel; the same news could be found when switching to other channels.

BBC is a television station that puts great focus on news. When a huge disaster, such as the earthquake in Japan, happened and was followed by the tsunami, BBC made it their headline news. Since the afternoon of March 11, the coverage of the disaster in Japan was broadcasted more often and shifted the previous news focusing on the crisis in Libya. In addition to reporting the earthquake and tsunami, BBC also reported the condition of some nuclear plants located in the earthquake zone. BBC quoted the cabinet secretary minister, Yukio Edano, who stated that the Fukushima plant had stopped automatically and was in safe condition.

The same thing was done by the official government television, NHK. The news on the enormity of the earthquake and tsunami immediately shifted to other programs. As a result, other programs, such as

drama, sports and quiz shows, were cancelled. In such a disaster situation, NHK television was turned into a news broadcast television.

The situation changed very quickly when the Japanese government, represented by Edano, held a press conference about the current situation at the Fukushima nuclear power plant. In his statement, Edano said the reactor cooling process did not work as it should have, but that people need not worry as no radiation leaks were detected. The government immediately declared a nuclear emergency situation and formed nuclear disaster agencies led by Prime Minister Naoto Kan.

As an experienced news agency, BBC immediately caught that it would be great news. Therefore, BBC began to give great attention to the nuclear emergency in Japan. NHK kept focusing on the handling of the earthquake and tsunami; meanwhile, BBC dug more deeply into the information on what was happening with the Fukushima nuclear plant after the tsunami hit that caused a failure in the reactor cooling system.

Overall, the number of hours BBC spent highlighting the nuclear crisis in Japan was higher than NHK. In addition to the differences of the television station and its programs, NHK, as the government television station, broadcasted much information about the government and social activities on how to resolve the earthquake and tsunami. The discussion on NHK and BBC coverage on the nuclear crisis in Fukushima will now focus on news sources, news format and news themes.

3.1 News Sources

The news sources that NHK had mostly used were official government sources, such as the prime minister, cabinet secretary, minister of industry, Board of Nuclear Safety, etc. The information gleaned was mostly from press conferences and press releases. In addition to official government sources, NHK also got much information from TEPCO sources, as this company is the owner of the nuclear power plant at Fukushima. For expert sources, NHK invited many professors of nuclear energy from prestigious universities in Japan into the studio. There were rarely independent parties, NGOs or groups with an anti-nuclear policy.

In the beginning of the news of the nuclear emergency, BBC used images from NHK World as its news sources. Therefore, some news sources, especially at press conferences, were the same ones broadcasted by NHK television. In addition, BBC also used some images from private television stations, particularly local NHK television. BBC also fielded their reporters to Tokyo, Fukushima and some places where there were refugees. For in-depth coverage, BBC interviewed several experts from various backgrounds, such as nuclear physicists, journalists, representatives of NGOs, weather experts, government advisors, etc. Since the topic discussed was about the nuclear reactor accident, most of them were physical scientists and nuclear experts, such as Paddy Reagan (professor of nuclear physics at the University of Surrey in Guildford, UK), Robin Grimes (professor of material physics at Imperial College London) and Dr. Walt Patterson (independent analyst and campaigner for energy and the environment).

In its Fukushima plant coverage, BBC tried to give an overview and complete explanation of the working system and the danger of nuclear accidents. BBC also reported the Japanese government actions dealing with this accident crash by asking for the opinions and judgments of Japanese experts and nuclear experts from other countries. For example, to compare policies taken by the Japanese government in the nuclear crisis, BBC interviewed Stuart Eizenstaat, one of former U.S. President Jimmy Carter's expert advisors, who accompanied the president of the United States when dealing with the nuclear accident at the 1979 Three Mile Island nuclear power plant. From the interview, it could be seen that Japan has a lot of nuclear power plants scattered across the country, although the Japanese government was not ready and was stumbling in dealing with the nuclear accident.

3.2 News Format

There is a very visible gap between NHK and BBC news formats related to the nuclear crisis at Fukushima. NHK coverage of the nuclear crisis was mostly dominated by the news in the room/studio and rarely used the live coverage of the field reporter or common people. The coverage displayed the government press conferences, ministry press releases and TEPCO coverage, as well as inviting nuclear scientists to the studio to comment on and provide technical explanation about nuclear power plants. The images NHK used were also official images provided by the government, TEPCO and the fire department. For example, NHK used the image taken from a distance of the helicopter over the Fukushima plant, and the image was repeated many times. But the image of the smouldering Fukushima nuclear plant alone was not to explain about what had happened there.

On the contrary, in addition to broadcasting the government and TEPCO press conference, BBC also asked their reporters to do live reports in the field, interview people, refugees and foreigners as expatriates and tourists. The BBC reporters even wanted to go nearer to Fukushima; unfortunately, the access there was blocked by police.

3.3 News Theme

BBC and NHK reported many topics in their disaster coverage. Some topics were similar, but some others were different. Even though both TV stations reported similar topics, the focus and point of view was different. NHK broadcasts were much more concerned with the progress of the government and TEPCO's efforts to resolve the nuclear crisis, such as evacuation, efforts by the fire department, and watering down the reactor using helicopters of the Japanese Self-Defense Forces.

3.3.1 *The explosion at Fukushima nuclear plant reactor*

On March 12, 2011 at 15:36, the first explosion occurred at reactor 1. As a result, the first reactor building was greatly damaged. The walls of the building collapsed and the roof flew away, blasted with the strength of explosion, leaving the building scaffolding only.

The moment of the blast was caught by Fukushima Chuo Television (FCT), a local private television station in Fukushima under the Nippon News Network (NNN). Actually, NHK and other private televisions have many fixed standing cameras around the Fukushima nuclear plant. However, all the cameras, except that of the FCT, were broken by the force of the earthquake.

Both NHK and BBC reported that explosion. NHK reported this moment first at 16:52 by displaying the plant's condition as shot by a camera from 30 kilometres in the distance, while NNN television reported the moment first at 16:48 by showing the moment of the blast of the reactor. NHK also used comparison images before and after the explosion. The comparison of the photos was accompanied by a description from the news anchor that described the strength of the explosion and the condition of the reactor building after the explosion. Unlike NHK, BBC reported the incident by displaying a video while the reactor building was exploding. BBC borrowed the video from NNN and Kyodo News showed this important moment as a headline in the BBC World News at 7 p.m. The image below is a picture that was used by NHK and BBC World.



A. First explosion on NHK
March 12th, 2012, 17:11:12 pm



B. First explosion on BBC World at
March 12th, 2012, 18:01:10 pm

This coverage was continuously repeated in subsequent BBC World News reports (once an hour). This spectacular explosion had a great influence on millions of viewers in Japan and overseas. BBC wanted to give the message that the condition of the nuclear accident at Fukushima was dangerous and needed great attention to resolve.

3.3.2 Watering down the reactor by helicopter

After the third explosion at reactor number 3 on March 14, 11:01 am, radiation around the nuclear plant rose dramatically, reaching a dangerous level for the plant workers. Therefore, TEPCO stopped the activities of workers who tried to fix the cooling system of the reactor. Meanwhile, the temperature in reactor number 4 had reportedly increased. Through satellite photos, the United States identified that the water in reactor 4 had almost run out. Thus, the Japanese government was working hard to add water to the reactor 4 through the air. The Japanese government asked its armed forces to deploy helicopters and flush the reactor with seawater.



Image of helicopter dropping water,
NHK, March 15, 2012, 10:21:19 pm

The image from NHK above shows the operation of spraying water on the reactor. A helicopter operated by the Japanese Self-Defense Forces loaded sea water and flushed it into the burning reactor. In the image, there is a notification on screen that the camera shot the moment from 30 kilometres in distance. NHK intended to show their obedience to the government order to not enter the evacuation area around 30 kilometres from the power plant.

BBC also paid great attention to the Japanese government's efforts by showing the same image borrowed from NHK. However, BBC believed that this effort was a futile action that reflected the

government's frustration because there was no other action that could be made to resolve the nuclear crisis. The helicopter could only carry a limited amount of water. In addition, because of the danger of radiation, the helicopter could not flush the water in from close range. Due to strong winds, the water often splashed away from the reactor, so they didn't know for sure how much water was flushed into the reactor.

3.3.3 Video Message from Japanese Emperor

On March 16, the Japanese emperor sent a video message to the people of Japan, which had been hit by three disasters at a time. This was the first time for an emperor to deliver a video message on television. The emperor of Japan paid such great attention to the disaster that he felt the need to send the message via video.

This message was broadcasted on all television stations in Japan. NHK broadcasted the message for six minutes with no editing at all. Meanwhile, BBC broadcasted the message by doing editing and giving background on the worries of the Japanese people that something like the Tohoku disaster and the nuclear accident at Fukushima would happen. The video message from emperor itself was only included for one minute. Through the description of the context of this video, BBC tried to give the frame of the importance of the emperor's message to viewers in that the nuclear accident at the Fukushima nuclear power plant was very critical and dangerous, so the emperor expected the government to resolve the crisis well.

Framing order on emperor's video message in BBC on March 17, 2012



A. BBC footage at 10:02:57 am



B. BBC footage at on 10:03:23 am



C. BBC footage at 10:03:38 am

3.3.4 People and foreign governments' dissatisfaction

For shaping their view on the Fukushima nuclear crisis, BBC often reported about the Japanese people's responses to government policy and TEPCO's work for solving the crisis. BBC interviewed the refugees who were evacuated from the radiation area. Most of them did not believe the information provided by the government because the information often contradicted the reality they faced. For example, the government said that after the earthquake all the nuclear power plants were in stable condition, but actually the Fukushima nuclear power plant cooling system had failed. The government also said there was no radiation leak, but it turned out that the radiation around the plant had increased drastically. In fact, explosions had occurred three times in the nuclear power plant that caused severe damage to the reactor.

The foreign governments were not satisfied with the explanation of the Japanese government about the actual condition of the nuclear crisis. They considered the Japanese government as hiding the true condition. Nonetheless, some neighbouring countries, such as South Korea and China, were worried about the radiation hazards; they asked Japan to provide information more transparently on the nuclear crisis. This was because many of their citizens were living in Fukushima and Tokyo.

Some foreign governments, such as France and the United States, also questioned the danger of the nuclear accident scale. At first, the Japanese government determined that the level of danger to the

Fukushima nuclear accident was on scale 4 of 7 on the international scale. For comparison, the Chernobyl accident (1986) was about on a scale of 7 (highest), and the Three Mile Island accident (1979) was about on a scale of 5.

The U.S. secretary of the Department of Energy, Steven Chu, said that the nuclear crisis at the Fukushima nuclear crisis was larger than what happened at Three Mile Island nuclear plant in Pennsylvania, USA. Three Mile Island had only one reactor leaking, while there were four leaking reactors at Fukushima, and one reactor was fire-stricken. In fact, the nuclear accident at Three Mile Island was on a scale of 5. Thus, the accident at Fukushima reactor should be on a scale of 6 or 7.

4. Discussion

For the mass media, a disaster is newsworthy material that can be sold since the disaster is an unusual situation and attracts much public attention. Therefore, when a disaster occurs, the media compete to cover and present it to the public.

In the framework of social construction theory, news and other television programs are not something that are fully objective. Through the news production process, reporters and editors can choose the facts and hide other facts. To convey their messages, reporters can also frame the news from their point of view.

In the case of the nuclear crisis coverage at Fukushima, NHK seemed to be in favor of the Japanese government and TEPCO. For example, in NHK's selection of information sources and news commentators, official government statements dominated most sources. In addition to the bias of its information sources, NHK also supported government policy through news framing. This framing could be found in the news of the first explosion that occurred at the Fukushima plant, through the flushing water into the reactor using helicopters, and by the delivery of video messages from the emperor of Japan.

When the first explosion occurred at the Fukushima nuclear power plant, NHK broadcasted the event with images, not video scenes, such as was done by BBC. Effects from the photos and videos will certainly be different to the audience. The selection method by NHK was carried out in order to reduce the people's anxiety about the dangers of radiation. As a consequence, the reports seemed to hide things that were, in fact, happening in the field, especially the radiation hazards arising from the explosion. The further results proved that the radiation did not just happen around a distance of 30 km from the plant, but also up to a distance of 80 km away, as it was carried by the wind. In an interview in the field, a female student expressed her anger against the media and the government for not conveying the danger of radiation to the Fukushima citizens. At the time of the first explosion, she was still standing in line waiting for gasoline around the gas station in Fukushima without wearing any radiation protector. In fact, at that time the radiation around that place was much higher than the normal limit. Thus, she and other residents were exposed to radiation for almost a day.

In the case of flushing water to the reactor using helicopters, there was also a gap between the NHK and BBC viewpoints. NHK proclaimed this action as an epic story of Japanese defense forces fighting the great impact of a disaster, while BBC said that it was a futile action and an expression of frustration because there was no other action that could be taken at that time.

Similarly, the difference in point of view was also found in the video message from the emperor of Japan. NHK framed this coverage with the point of view of the emperor's concern and sympathy for Japanese people who had suffered the triple disasters. Meanwhile, BBC framed their point of view of the emperor's anxiety about the rising danger of a nuclear crisis.

In general, BBC reported the nuclear crisis with a critical perspective; this led BBC to become an alternative of information source for the Japanese people, who were not satisfied with the NHK and other Japanese private television coverage.

Bill Kovach and Tom Rosenstiel (2007) [1] wrote in their book *The Elements of Journalism: What Newspeople Should Know and the Public Should Expect*, about ten basic principles of journalism.

Three of these principles are: (1) the duty to tell the truth, (2) loyalty to the people (citizens), and (3) being an independent monitor of power. In accordance with the principles of journalism, at the time of a disaster the mass media should deliver news and information that are accurate and useful. Media also have to provide information that can protect human life from danger. Professionalism while working and the public interest must take precedence over the interests of the market and government.

In times of disaster, such as during the nuclear crisis, many people look for information about what exactly happened, but in the case of Japan, they were frustrated because the information reported by the media came from one source only, namely the government and TEPCO. The media also didn't do any clarification and investigation in the field. Even the people's opinions, in which they were not satisfied with the government's performance, was not reported. This obviously showed that NHK was in favor of the government and TEPCO. In fact, according to the basic functions, the mass media should serve as a means to control the performance and accountability of the government, especially in the policy of resolving disasters and in post-disaster reconstruction.

Why did this happen? Some possible answers are due to government's pressure and market forces (through advertising by the electric company). The Japanese government restricted journalists to access the information through the system of *kisha clubs* (reporters' clubs), meaning only journalists who were enrolled in a press club of the government office have access to information from that office. Indirectly, this is a kind of censorship of the freedom of information. Under the *kisha club* system, reporters are not usually allowed to criticize the institutions that the reporter are covering. Freelance journalists and the journalist who are not members of the *kisha clubs* are not even allowed to enter the press room and participate in the press conferences.

In the name of security, the government also blocked road access to the disaster area so that journalists couldn't report what happened there. In addition, nuclear energy was the official policy of the country so that in the event of an accident, the government must take responsibility. A Japanese freelance journalist, Doi Yoshihira [2], claimed that the nuclear energy business in Japan is a kind of mafia system involving a wide range of institutions, such as the government, parliament, judicial institutions, businesses, mass media and scientists. They support each other to build a myth of "nuclear energy safety" and persuade civilians to believe in it.

5. Conclusion

Nuclear technology as a future alternative technology is still questionable when it comes to safety. The technology is advancing but up to now, there has been no guarantee that nuclear power is completely safe. Unfortunately, the media and the Japanese government closed the debate on the safety of nuclear technology. The discourse on the use of nuclear energy is controlled by parties that support the existence of nuclear power plants. The media also closed off any comments from minority groups that did not agree with the existence of nuclear power plants.

Japanese society and the media felt victimized by the Japanese government policy of blocking access to the news of the accident. To find out information on what really happened, they sought foreign media sources such as BBC.

As an international news station that is trusted by various societies, BBC has a lot of experience in reporting disasters and crises. BBC tried to report what actually happened at the Fukushima nuclear disaster. In addition to fielding its journalists and reporters, BBC also completed the coverage with the borrowed images and news from local television stations in Japan. BBC was also critical in addressing the government policies that restricted the Japanese nuclear crisis coverage.

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References

- [1] Bill Kovach, Tom Rosenstiel. *The Elements of Journalism, What Newspeople Should Know and the Public Should Expect*. New York: Three River Press; 2007.
- [2] Doi Yoshihira. *Genshiryoku mafia: Genpatsu Riken ni Muragaru Hitobito*. Tokyo: Seiunsha; 2011.